

## Session 11 Notes

Title: **Relationship between measurement error and unit nonresponse in household surveys: An empirical approach in the absence of validation data**

Presenter: **Andy Peytchev**

### **Topic:**

The presentation was about relationship of measurement errors and unit nonresponse in household surveys.

### **Discussion:**

-Question: Have you considered using randomized response in this context as a third method for testing the measurement error, which potentially can affect your response and also the actual measurement? I do not know if it works but it is actually designed for the things you are actually testing here.

-Answer: I think that is a good idea. It is a very good point.

-Comment: Randomized response may not work, because it works not in individual level. It works in aggregated level.

Title: **Common misinterpretations and pitfalls in the use of Cohen's Kappa and Cronbach's Alpha.**

Presenter: **Paul Biemer**

### **Topic:**

Topic of this presentation was about problems when using indiscriminately the Cohen's Kappa and Cronbach's Alpha. In conclusion, the alpha tends to be biased (correlated errors impart a positive bias)

### **Discussion:**

-Question: How much would your conclusions change using fewer items?

-Answer: The problem when you have few items is that there is a lot of variation, so the variance overwhelms the bias.

-Question: It seems to me that what you said there, keeping the assumption that the error variances are stable. That seems to be given by the fact you have panel data if I do have two independent assessments at the same time, would you suspect that then the variance stable is the best assumption here?

-Answer: If you had three assessments, because you need three, at the same point time what I suggest is to fit both simplex models with stable variances, see if there is any big differences, and if there are and if you have to choose, I will still go back to the original simplex because it seems to be more stable than true variance scores.

-Question: Is there any recommendation on how much time should have between the panel waves?

-Answer: In our case it is around 18 months. The main consideration there is when you have too little time. But, I wouldn't worry too much about the time between the waves.

-Question: Do any of these methods allow of the inclusion of covariates? Is there any other method effect in a way that can affect any of that correlation system?

-Answer: It is certainly possible to put in a term for the method in fact.

**Title: Using substantive diagnostics to evaluate the validity of latent class indicators of measurement error.**

**Presenter: Clyde Tucker**

**Topic:**

The presentation was about using Latent Class Analysis for measuring response error. The main conclusions were that one cannot rely on statistical diagnostics alone. There is the need of better manifest variables to explain more variance. We have been unable to develop meaningful latent variables with more than 3 of 4 categories. Problems with the latent class analysis increase because of attitudes or opinions issues.

**Discussion:**

-Question: For some of the models that we show its independence, you take one class with its estimated, you take the design class or the link is independent?

-Answer: That is right. The link class has to be independent on demographics.

-Question: How well separated are the classes, because it is a probabilistic assignment within the process right?

-Answer: Here is the problem, first of all the inclusion is a normal problem process in latent classes. But there are some other problems, in this case it is true that there is a relationship between demographics and the latent, so are we measuring demographics or the characteristics we are analysing? ... You really need large samples and you might need to use 2 or 3 models but the software takes a lot of time.